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Utilizing Edmodo to Enhance Motivation in Learning among Adolescents in Tertiary institutions

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Abstract

The study investigated utilizing edmodo to enhance motivation in learning among adolescents in tertiary institutions. Based on the objectives, one research question and two hypotheses were formulated based on the study. Descriptive research design was adopted. The population comprises all the 8,303 students at Alvan Ikoku Federal College of Education in Owerri Municipal Council of Imo state. A sample of 300 students participated in the study comprising of 110 male and 190 female while stratified random sampling technique was used in selecting students' levels (year two, three and four). The instrument used for data collection was motivational orientations Questionnaire scale (MOQS). The MOQS was adopted by the researchers and validated by two expert judges from measurement and evaluation department. The instrument has reliability of 0.79 and 0.83 Cronbach alpha and split-half (Spearman-Brown) respectively which was considered very adequate. The data generated was analyzed using mean and standard deviation for the research question and t-test and ANOVA were used to test the hypotheses at 0.05 level of significance. The results showed that students have a high level of intrinsic motivation irrespective of gender and year/level of adolescents. Based on the findings, it was recommended that Workshops and seminars should be organized to educate teachers about the benefits of utilizing technology in motivating students to learn.

Keywords: Edmodo, Motivation, Learning and Tertiary Institutions

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Introduction

Globally, there has been an increasing concern in the education sector on how to ensure that students learn optimally at school and achieve academic excellence in their academic pursuit. In Nigeria, there has been a nationwide cry on the fallen standards of education and various factors have been identified for low academic achievement among students and these include poor study habit, laziness, ineffective classroom instructions and inadequate provision of needs among others (Akpan, 2015). It has been noticed that some students in the classroom do not pay attention to what the teacher is doing as they are easily caught engaged in other activities. Jones (2018) observes that it is easy to see students slouched in their chairs and not listening to the teacher or participating in the classroom discussion which portrays lack of engagement. Motivating students to learn in school is a topic of great concern for educationist today and motivating students so that they can succeed in school is one of the greatest challenges of this century (Awan, Noureen and Nas, 2018). They further states that lack of motivation is a big hurdle in learning and a pertinent cause in the deterioration of education standards. The sole objective of teachers in the classroom is to sustaining the student's interest and motivation.

Motivation is a strong force in achievement. Moula (2015) observes that motivation is one of the factors that contribute to academic success; that parents and educators should strive to understand the importance of promoting and encouraging academic motivation early in life. Feldman (2005) refers to motivation as factors that direct and energize the behaviour of humans and other organisms, while Wood (2002) sees motivation as a process that initiates, directs, and sustains behaviours to satisfy physiological or psychological needs. Motivation is also seen as what gets one going, keeps one going, and determines where one is going (Slarin, 2006). Motivation is considered as a potential to direct behaviour. According to the definition, students' motivation may be manifested in cognition, emotion and/or behaviour. For example, a student's motivation to get a good grade in mathematics may be manifested in happiness (emotion) if he or she scores high on a test. It may also be manifested in studying for a test (behaviour) and in new conceptual learning (cognition) when studying for the test. Needs are specified instances of the potential to direct behaviour (Hannula, 2004). Psychological needs that are often emphasized in educational settings are competence, relatedness (or social belonging) and autonomy (Ryan & Deci, 2000). I have chosen to define motivation as a potential to direct behaviour. Motivation, like other attitudinal behaviours, encompasses many aspects and one such aspect is motivational orientations. According to Steward, Bachman, and Johnson (2010), motivational orientations act as a driving force that encourages students to engage in a task. Motivational orientations consist of several constructs and among these are intrinsic motivation, extrinsic motivation, personal relevance, self-efficacy and self-determination.

Intrinsic motivation is an inner force that motivates students to engage in academic activities, because they are interested in learning and they enjoy the learning process as well (Schiefele in Onyekwere, Okoro & Unamba, 2018). He further explained that intrinsic motivation is the true drive-in human nature, which drives learners to search for and to face new challenges. Their abilities are put to the test and they are eager to learn even when there are no external rewards to be won. Students with learning goals of seeking understanding for mastery of science content and skills are said to be intrinsically motivated (Cavallo, Rozman, Blinkenstaff, & Walker, 2003). Csiksezentmihalyi and Nakamura in Onyekwere, Okoro & Unamba (2018) stated that intrinsically motivated individuals possess the following characteristics: They engage in both mental and physical activities holistically, they remain highly focused throughout these activities with clearly defined goals, they are self-critical,

they self-reflect on their own actions realistically, and they are usually relaxed and not afraid to fail during learning. A research study done by Stipek (2018) concluded that intrinsically motivated students learn independently and always choose to do challenging tasks. They persevere to complete the tasks they have undertaken. They integrate their knowledge acquired in school with their experiences gained from outside school. They often ask questions to broaden their knowledge and learn regardless of any external push factors or help from teachers, and they take pride in their work and express positive emotions during the learning process. Highly intrinsically motivated students are able to learn new concepts successfully and show better understanding of the subject matter (Stipek, 2018).

Extrinsic motivation drives students to engage in academic tasks for external reasons. Extrinsic motivators include parental expectations, expectations of other trusted role models, earning potential to enroll in a course later and good grades. According to Benabou and Tirole (2003), extrinsic motivation promotes effort and performance with rewards serving as positive reinforces for the desired behaviour. Extrinsic motivation typically produces immediate results and requires less effort (Ryan & Deci, 2000). The down side of it is that extrinsic motivators can often distract students from true independent learning. Another problem with extrinsic motivators is that they typically do not work over the long term. Once, the rewards are removed, students lose their motivation (DeLong & Winter, 2002). As extrinsically motivated, students tend to focus on earning higher grades and obtaining rewards.

In the case of relevance, it has been commonly equated with students' interest in a task that they do (Matthews, 2004; Osborne & Collins, 2001). Levitt (2001) interpreted relevance as importance, usefulness, or meaningfulness to the needs of the students. Keller in Onyekwere, Okoro & Unamba (2018) defined relevance as a more personal interpretation, i.e., a student's perception of whether the content or instruction satisfied his/her personal needs, personal goals, and/or career goals. When students themselves decide on the topics of interest in school science, relevance takes on a personal meaning when students' hearts and minds are captured (Osborne & Collins, 2001; Reiss, 2000). Thus, the teachers will only engage students in meaningful learning, if the curriculum has personal value and enriches students' cultural self-identities. According to Holbrook, Rannikmae, Yager, and De Vreese (2003), students perceive education as relevant to them through three areas: Firstly, usefulness in the society which means they are more interested to learn if the content is related to societal issues; Secondly, students' interest towards learning which means that students are motivated to learn and do the tasks and activities and Lastly, importance of the course they are taking which means the content learnt is meaningful and useful to them.

According to Bandura's social cognitive theory, self-efficacy is defined as individuals' beliefs about their own capabilities in learning and performing tasks at specific levels. Self-efficacy beliefs determine how learners feel, think, motivate themselves, and behave (Bandura, 1997). Baldwin, Ebert-May, and Burns in Unamba, Ngozi, Grace & Chukwudebule (2022) observed that self-efficacy is especially important in learning difficult subjects because students enter courses with varying levels of fear and anxiety. As the students' self-efficacy may affect the learning process, choice, the amount of effort put into accomplishing the task, and persistence in learning are some factors that are important in this respect (Kennedy, 2017). Self-efficacy beliefs influence on the choices learners make and the courses of action they pursue (Pajares, 2001). Students with high self-efficacy are often confident enough to accept challenging tasks. They put in more effort and persist through difficult stages in learning. Goals are set in order to accomplish the tasks given. On the other hand, students of low self-efficacy may avoid the learning task and opportunities to seek for

help. It is not surprising that many struggling learners have low self-efficacy in their studies, because they believe that they lack the ability to succeed. Low self-efficacy students tend to avoid challenging courses and give up quickly when difficulties arise (Margolis & McCabe, 2006). Many studies have reported that there is a relationship between self-efficacy and academic achievement (Kan & Akbas, 2006; Zushou, Pintrich, & Coppola, 2003).

Self-determination is the ability of students to choose and control over what and how they want to learn (Reeve, Hamm, & Nix, 2003). An advantage of this approach is that when students are given the freedom to determine their academic tasks, they are more likely to benefit from them (Glynn & Koballa, 2006). Garcia and Pintrich in Unamba, Ngozi, Grace & Chukwudebule (2022) found that the intrinsic motivation of students increased when the students could select the course readings and term paper topics as well as the due dates for class assignments. Reeve et al. (2003) also concluded that when students believe that they have some degree of control over their learning, such as selecting some of their lab topics, overall motivation is increased. In a study conducted by Black and Deci (2000), results obtained supported the idea that self-determination leads to improvements in student learning. They found that students with a high desire to enroll in the course were significantly correlated with perceived competence, interest/enjoyment of the course, low anxiety, and were more focused on learning whilst those who enrolled due to course requirements were significantly correlated with dropping out of the course. Lavigne, Vallerand, and Miquelon (2007) posited that teachers who support self-determination in students' result in a positive impact on students learning toward science and pursuing a career in science.

Hargreaves in Chow and Bob Chui (2013) argued that one major reason why teachers fail to implement the motivational orientations and effectively communicate what they are teaching was their inability to plan for motivational strategies in their teaching. He further stated that only a limited number of learners become interested in learning in the first place and others find it abstract and less stimulating. Instructional technique adopted by the teachers can be manipulated to bring about improvement among the learners.

Several studies have shown that good instructional strategies are capable of improving the performance and achievement of learners (Iji, 2005; Ihendinihu, 2008). This may be visible if a teacher employs teaching strategies or techniques that take into cognizance of learner's achievement, creativity, feedback and innovations.Teachers should be able to integrate the use of supporting technology and higher-order thinking skills that can motive learning (Cakrawati, 2017). Using technologies with new teaching methodologies can create innovative learning environments that allow instructors to more efficiently organize their teaching and such technology is edmodo.

Edmodo is a social learning platform for teacher, students, and parents to share content or information and homework. Through Edmodo, educators and learners are connected in a safe social environment. They can share digital contents and access homework, grades, class discussion from computer or any device. The following explanation provides Edmodo features that are useful for both educators and learners (http://susd.edmodo.com). Participants can exchange concepts, records, events, and projects in a virtual setting. It is a private micro-blogging and social learning platform for teachers and students. According to Holotescu and Grosseck (2009), microblogging is a new system of blogging and a Web 2.0 technology that allows users to publish online brief text updates. Edmodo was identified by the American Association of School Librarians in 2011 as one of the top 25 websites that foster the qualities of innovation, creativity, active participation, and collaboration in the classification of "Social Networking and Communication" (Kongchan, 2012).Learning media are an important element in every learning and teaching process

because they are the tools teachers use to deliver the learning material and to facilitate learning activities (Kirkwood & Price, 2014). Edmodo is a free social learning platform for teachers, parents, and students where there are already over 29 million users. Edmodo can be used in a classroom through a variety of applications that allow students to connect with each other and their teachers, as well as measure student performance (Mrayed, 2020). Teachers can set up classes for each in-school class or set up a large class and have all of their students in one group. Edmodo makes it simple to track student progress.

According to Gay &Sofyan (2017), Edmodo is an online learning environment that is an interactive process where the student is assisted by others (teachers or peers) to acquire knowledge or skills that cannot be acquired without assistance at that point in time. Through Edmodo, educators and students can share notes, links, and documents. Educators also have the ability to send alerts, events, and tasks to students and may decide to send something on a timeline that can be viewed by the public.Based on what Shams-Abadi et al. (2015); Zain, Sahimi, Hanafi & Alias (2016) pointed out, Edmodo is an education website that absorbed the idea of social networking and improved it to make it suitable for classroom teaching. With edmodo, students and teachers can connect with each other by sharing ideas, questions, and useful tips. This means that, by using Edmodo, both teachers and students can participate in activities that support language learning and can stay connected by sharing ideas, questions, and useful techniques. In addition, Edmodo is based on the school's social network environment, so like other social media such as Facebook, Twitter, and Path, Edmodo is also used to promote communication among teachers, students, and parents in the school environment (Balasubramanian, Jaykumar & Fukey, 2014; Ma’azi & Janfeshan, 2018). In order to prevent students from being distracted when using Edmodo, the content of Edmodo is controlled by the teacher. In this way, teachers can prevent inappropriate things from appearing on public social media.

Edmodo works as an educational institution for its own benefits. Edmodo is ideal for teaching and learning as a primary tool, as a semi-primary tool in a web-enhanced course with mixed-mode learning, or as a supplementary tool in a web-enhanced classroom (as a supplement to face-to-face). Additionally, Gabrina&Rahmawati (2019) found in their study that Edmodo helped the students develop their writing and listening skills. The students have a positive response towards the use of Edmodo as a learning tool. Edmodo facilitates the students' ability to work independently and share their thoughts through group discussions; these discussions help them a lot in writing and can be used to inspire students to write at their own pace, students are more interested in learning because Edmodo allows collaborative writing, which allows them to practice their native language and using online learning platforms in the learning process is effective since it saves time and effort. They also consider that online learning is environmentally friendly because it can save paper used for the assignment.

Research on Edmodo in learning has identified its potential to provide teachers and students with many benefits that facilitate the teaching and learning process. Using Edmodo for teaching and learning can be a good teaching design that can stimulate curiosity, increase motivation, and enrich the learning process (Song & Kong, 2017). The advantages of using Edmodo in the teaching process are that some teachers may only want to use Edmodo to share resources and learning objects with the whole class (Ekici, 2017). These can be accessed in class to save paper, prevent students from searching for inappropriate resources, etc. Lie (2015) also explained that when class time is not enough, Edmodo can have extended discussions. Another advantage is that some students who are usually shy in class can express themselves more freely online. Furthermore, online discussions enable teachers to tailor

course materials to students' personal interests and to spark discussions about moral judgments. Evenddy & Hamer (2016) also state that Edmodo can make the teaching-learning process more interesting. By using Edmodo's features, the teacher can give assignments, quizzes, share the materials, and give feedback on students' work directly. Some previous studies have shown that Edmodo is effective for the teaching and learning process. As cited by Siahaan (2020); Wahyuni (2018) found that students in the experimental class gained better writing skills. Edmodo provides a safe and simple way for teachers and students to post class materials, share links and videos, and access assignments, grades, and school notifications. Teachers and students can store and share various forms of digital content, such as blogs, links, pictures, videos, documents, presentations, etc. To prevent outsiders from joining the school network, Edmodo provides special codes for schools and classes. These are for students and are necessary to join the group. By using Edmodo, teachers and students can more easily complete the learning process because it can be used as an effective medium for online courses anytime, anywhere. This platform can effectively share the ideas and opinions of students and teachers (Holland & Muilenburg, 2011). It is also an effective tool for the teacher to make an assignment. Pardede (2019) identified various advantages of using Edmodo in mixed EFL courses, such as its ability to facilitate the intensive communication that is necessary in an EFL environment and its potential to help run various types of active learning (such as providing assignments and related resources, peer discussions, online quizzes on learning topics, submission of digital content assignments, and easy contact with students or teachers from different schools or other countries/regions). Edmodo also promotes teachers to meet the needs of different students, supports a sense of community among students, makes them feel respected and important, and provides three useful standards, namely usability, accessibility, and compatibility (Holland & Muilenburg, 2011). Edmodo in an online learning environment is an interactive process in which students gain knowledge or skills that they could not acquire without the assistance of others (teacher or peers). With Edmodo, educators and students can share notes, links, and documents. Educators can also send alerts, events, and tasks to students, and they can decide to send some content on a timeline that the public can view. In addition, as an online learning platform, Edmodo can promote students' self-regulated learning in a variety of ways, thereby benefiting students. By accessing language-related resources and tools through Edmodo, learners can select and use materials that meet their preferences and goals anytime, anywhere (Gay & Sofyan, 2017).

Alshawi & Alhomoud (2016); survey Impact of Edmodo use on students' learning motivation and teacher-students communication Edmodo significantly increased students' learning motivation and student-teacher's interaction. They also preferred taking quizzes and doing assignments on Edmodo.Hariri & Bahanshal (2015); Mixed Methods Effectiveness of using Edmodo in blended learning environment to support learning, interaction, motivation and classroom dynamics of EFL learners Students' English proficiency positively correlate with the use of Edmodo. It also increased learning, motivation, and classroom dynamics. Komara (2014); Descriptive Qualitative Use of Edmodo to motivate students in learning grammar Edmodo was able to motivate the participants to learn. Turkmen (2012); qualitative case study motivational benefits and the changing role of teachers during the utilization of Edmodo in EFL learning. Participants benefited from using Edmodo in English classes. Edmodo use reduced teacher's preparation time and changed her role from "an ultimate leader" to be "a guide" in the process. Therefore, this study intends to investigate **utilizing edmodo to enhance motivation in learning among students in tertiary institutions.**

Purpose of the study

The main purpose of this study was to determine whether edmodo will enhance motivation in learning among students. Specifically, the study sought to;

I. To find out the motivational orientations mean scores of students towards utilizing edmodo in learning among students in tertiary institutions
II. Is there any significant difference in motivational orientations mean scores between male and female students towards utilizing edmodo in learning among students in tertiary institutions
III. Whether there will be significant difference in motivational orientations mean scores of years two, three and four students towards utilizing edmodo in learning among students in tertiary institutions

Research Question

1. What are the motivational orientations mean scores of students towards utilizing edmodo in learning among students in tertiary institutions

Hypotheses

The null hypotheses were formulated to guide the study at 0.05 level of confidence.

HOI: There is no significant difference in motivational orientations mean scores between male and female students towards utilizing edmodo in learning among students in tertiary institutions.

HO2: There is no significant difference in motivational orientations mean scores of year two, three and four students towards utilizing edmodo in learning among students in tertiary institutions.

Method

The descriptive survey research was used for the study. According to Maduakonam (2004), a descriptive survey research seeks to collect detailed factual information that describes the nature of existing conditions. It assesses the characteristics of the whole population and usually study sample drawn from the population of the study. The population of the study consisted of all the students in the tertiary institutions in Imo state. The sample was made up of 300 students comprising of 110 male and 190 female while stratified random sampling was used in selecting three levels of students (year two, three and four). The first section of the instrument was designed to obtain the demographic profiles of students, such as participants' age and gender. The second section contained a questionnaire adapted from Glynn et al. (2009) and it consisted of 30 self-assessment items measured on a 5-point Likert type scale ranging from five for always, four for usually, three for sometimes, and two for rarely to one for never. The items were categorized into five motivational scales, namely, intrinsic motivation, extrinsic motivation, personal relevance, self-efficacy and self-determination. The description of each scale and an example of the test item are given in. Face and content validity of the instrument were established by lecturers who were experts in psychology and measurement and evaluation. They scrutinized the contents of the questionnaire, offered useful corrections and suggestions, which led to some modifications. Based on such corrections and modifications, the instrument was considered adequate and the final draft of the questionnaire was produced. The reliability of the instrument was established when it was administered to 50 students selected from two schools, which are similar with the people used in the main study. The instrument has reliability of 0.79 and 0.83 Cronbach alpha and split-half (Spearman-Brown) respectively. The reliability coefficients were considered high

enough and suitable for use in this study. Mean and standard deviation were used to analyze the data for the research questions while t-test was used to test the null hypothesis at 0.05 level of confidence. The acceptable level of mean score was 2.50 and above.

Results

Research Question one: What are the motivational orientations mean scores of students towards utilizing edmodo in learning

Table 1: Means and SD for Motivational Orientation Scales of students towards utilizing edmodo in learning

Variables	Mean	SD	Rank
Intrinsic motivation	18.67	4,12	1
Extrinsic motivation	15.23	3.49	3
Personal relevance	16.89	2,45	2
Self-determination	13.45	3.23	5
Self-efficacy	13.52	3.34	4

The mean scores for the motivational orientations range from 18.67 to 13.45 (see Table 1). In terms of intrinsic motivation, the students responded that they enjoy learning; they find learning very interesting and not challenging for them. In terms of personal relevance, they considered learning highly relevant to their personal goals and as having significance or practical value to them. The high level of self-efficacy in learning suggests that they were fully confident in using edmodo, in accomplishing the learning tasks and in performing well. In the case of self-determination, students seem to take it seriously enough and were putting sufficient effort in it.

Hypotheses testing

HOI: There is no significant difference in motivational orientations mean scores between male and female students towards utilizing edmodo in learning

Table 2: Motivational Orientations of male and female in Learning

	Male (110)		Female (190)			
Variables	**Mean**	**SD**	**Mean**	**SD**	**t-value**	**P**
Intrinsic motivation	14.16	3.54	14.23	3.10	0.21	0.831
Extrinsic motivation	15.13	3.47	15.54	3.51	1.04	0.300
Personal relevance	13.77	3.44	13.88	3.24	-0.31	0.760
Self-determination	13.16	3.22	13.50	3.17	-0.95	0.340
Self-efficacy	13.87	4.05	13.25	3.75	1.44	0.151

Gender differences in motivational orientations were analyzed using independent t-tests and the results are presented in Table 2. As the means indicate, both male and female have high levels of extrinsic motivation and moderate levels of intrinsic motivation, personal relevance, self-determination, and self-efficacy in learning. No statistically significant gender differences were found in the other five motivational orientations, hence, they were considered comparable between boys and girls.

HO2: There is no significant difference in motivational orientations mean scores of year two, three and four students towards utilizing edmodo in learning.

Table 3: Analysis of variance on the mean scores of year one, three and four students

Source of Variation	Sum of Squares	df	Mean Square	F	Sign Level	Decision
Between Groups	219.007	2	109.503	2.754	0.065	Accept HO
Within Groups	11807.940	297	39.757			
Total	2026.947	299				

The result of the test of hypothesis reveals that the F-value is less than the table-value at 0.05 level of confidence. The null hypothesis of no difference is therefore accepted. This implies that there is no significance difference in the ratings of year two, three and four students on towards utilizing edmodo in learning.

Discussion

The findings of the study reveal that students have a high level of intrinsic motivation. The high level of intrinsic motivation displayed by the students indicates that the students have a positive response towards the use of Edmodo as a learning tool. Edmodo facilitates the students' ability to work independently and share their thoughts through group discussions; these discussions help them a lot in writing and can be used to inspire students to write at their own pace, students are more interested in learning because Edmodo allows collaborative writing, which allows them to practice their native language and using online learning platforms in the learning process is effective since it saves time and effort. There is also the need to raise students' extrinsic motivation to enhance better learning outcomes. Perhaps, the most important of all, teachers should teach in such a way that it is interesting and enjoyable for students. McKinney (2011) suggested teachers should create a conducive learning environment that is challenging, stimulating and relevant to boost students' interest and motivation, for instance, promoting cohesiveness among students using small group cooperative learning strategies. This is a powerful pedagogical tool that enhances students' self-efficacy (Raelin, Reisberg, Whitman, & Hamann, 2007), motivation (D. W. Johnson & R. T. Johnson, 1999), and achievement (Kose, Sahin, Ergun, & Gezer, 2010). Teachers should explore and use this strategy to make students more determined and efficacious to learn combined science instead of using the teacher-centered expository approach that is so prevalent among science teachers. Teachers should also attempt to link science concepts to students' experiences, so that they can realize the relevance of what they learn to their everyday lives, thus making learning more meaningful and relevant.

In terms of gender, no significant difference was found between male and female in motivational orientations and was comparable between the two groups.

Finally, the result indicated that there is no significance difference in the ratings of primary one, two and three teachers on the motivational strategies that would be adopted to re-engineer primary school teachers for sustainable development.

Conclusion

The present study provides teachers and educators valuable information on students' motivation to learn. Understanding of how each of the motivational dimensions influences learning will place teachers and educators in a better position to help and support the

students. The study concludes that students have a high level of intrinsic motivation irrespective of gender and year/level of students.

Recommendations

The following recommendations are hereby made to increase the level of motivation in students for learning.

1. Workshops and seminars should be organized for teacher educators to know proper innovative technologies that will enhance students' motivation in learning
2. Teacher educators should inculcate the desire by providing adequately for their students' needs, as well as encouraging them both intrinsically and extrinsically to achieve their goals.
3. Teacher Educators as well as policy formulators must re-examine grading policies both at the school wide and classroom level to ensure that the reward system provides a situation in which students are encouraged to work hard

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